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**Saccharification of starch without steaming, for use as fuel - by
sterilising starch with addn. of acid, grinding and saccharifying with
(hemi)cellulase, pectinase, glucoamylase and acidic alpha-amylase**

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Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 57018991	A	19820130	JP 8094636	A	19800710	198210 B
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Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 57018991	A		8		

Abstract (Basic): JP 57018991 A

Starch-raw material (I) is saccharified by (1) sterilising (I) with the addn. of dil. acid (II); (2) grinding; (3) treating with a mixt. of cellulase, hemicellulase, pectinase, glucoamylase and active acidic alpha-amylase.

As (II), hydrochloric acid, sulphuric acid and phosphoric acid are pref. used. The pH of (II) should be 1-2.8. (I) is pref. treated with (II) at room temp. for at least 2 hrs. (I) is pref. grinded into 20 mesh or finer and saccharification with the enzyme-mixt. is carried out at room temp. to 50 deg.C at pH 3.5-4.5 for 5 hrs. - 2 days.

(I) can be used as a source for the prodn. of energy.

Saccharification can be carried out without steaming (I), resulting in economisation of energy.

Title Terms: SACCHARIFICATION; STARCH; STEAM; FUEL; STERILE; STARCH; ADD; ACID; GRIND; SACCHARIFICATION; HEMI; CELLULASE; PECTINASE; GLUCOAMYLASE; ACIDIC; ALPHA; AMYLASE

Index Terms/Additional Words: HEMICELLULASE

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